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DISEASES OF THE NOSE

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For so prominent an organ, the nose is little appreciated or understood. All know of its usefulness in regard to the sense of smell, but few appreciate another function which is far more important. The primary duty of the nose is to warm and moisten the air before it enters the lungs.

The nose is a much larger organ than is commonly believed. The portion which lies upon the face is a comparatively small part of its organ. The length of the nose from the tip backwards is equal to that of the roof of the mouth. The height of the nasal cavity may be roughly estimated as the distance from the roof of the mouth to the top of the orbit. From side to side the nose is very narrow.

In the normal state, the cavity of the nose is divided into two equal portions by a vertical partition which is known as the nasal septum. The septum is composed of bone for about the posterior two-thirds, and of cartilage for the anterior third. The turbinate bones are two scroll-shaped bodies covered by soft mucous membrane and are given in the text book as three in number, arranged one above another on the outer wall of each side of the nose. Practically, there are but two turbinate bones on either side. These are known as the inferior and middle turbinates. The function of the turbinates is to warm and moisten the air.

The entire nose is lined with mucous membrane and is very rich in its blood supply. The immense number of tiny mucous glands secrete a large amount of mucous fluid. This, of course, is the moisture which is added to the inspired air in passing through the nose. If the amount of mucus secreted is greater than can be vaporized by the air, it slowly gravitates down the walls of the nose and finally drops back into the throat. This condition is what the layman knows as catarrh.

The nose is subject to accidents and to a variety of diseases. Fracture of the bones of the nose is a common occurrence. Many such accidents are not recognized and the nose is allowed to heal in whatever position the fractured ends of the bones may be. The deformity is often not noticeable, but frequently the damage to the functional activity of the nose is considerable. Any severe injury to the nose should be referred to a competent physician at once.

Acute coryza, or what is familiarly known as "cold in the head," is probably the most acute inflammatory reaction which occurs in the human body. Nearly everybody has it occasionally. Certain people have it practically all the time. Acute coryza, in its simplest form, is an acute inflammation of the lining membrane of the nose. If the process of inflammation is extensive enough to reach the cavities connected with the nose, then the head cold becomes more severe in its manifestations. Head colds usually occur immediately, or soon after, exposure to cold or wet. Certain head colds are undoubtedly due to direct infection from some specific germ. There appears to be considerable difference of opinion regarding the transmitting of head colds from one person to another. Some writers claim all colds are infectious. The writer, however, does not believe such a theory to be true. Simple head colds are, in my opinion, simply a mechanical process. Blood driven from one locality to another by exposure to cold or dampness, forces an increased blood supply to the nasal organ. Such a cold is attended by sneezing, caused by the swelling of the soft tissues which line the nose, and by a greatly increased secretion of mucus. Such colds are not as a rule attended with marked headache and pain in the back, legs, etc.

There is another type of head cold which does produce a marked systematic reaction characterized by all the symptoms of the simple cold, plus elevated temperature, headache, backache, etc. Among certain unfortunate people, marked neuralgic pain in the teeth, face or eyes form additional discomforts. This form of coryza unquestionably is brought about by bacterial invasion of the nasal region and it is quite probable that it is infectious and can easily be passed from one person to another. Such colds are most frequent in the colder months of the year but may occur at any time. The acute infectious cold is what is commonly known as "grippe." Grippe is a specially active inflammation of the nasal tissue accompanied by constitutional reactions, more or less severe. It is a dangerous condition, inasmuch as it is usually attended with a marked lowered vitality in other organs of the body and the inflammation has a tendency to extend to adjacent organs. Pneumonia, middle ear disease, acute inflammatory processes in the frontal and ethmoid sinuses, and the Antrum of Highmore, are common secondary complications which arise during or after an attack of the grippe. Chronic head colds are the results of other nasal conditions which will be described later.

Certain individuals take cold upon the slightest exposure. Such a tendency is usually due to abnormal anatomical or physiological conditions of the nasal septum or turbinate bones.

In order that the nose shall perform its functions perfectly at all times, it is necessary that the nasal partition shall be straight and the turbinate bones remain in their normal position. If one side of the nose is larger than the other, considerable trouble is bound to arise. Unequal nasal cavities produce frequent head colds, headache, neuralgia, catarrh, deafness, chronic sore throat, sensitive lungs, laryngitis and other disturbances of health and comfort. In the case of head colds,—unequal nasal cavities give rise to one attack after another. This is easily proven by the marked relief from coryza which is obtained after the submucous resection operation for deflected nasal septa. The improvement is almost magical in the majority of cases.

The treatment of head colds is divided into local and constitutional measures. The time-honored remedy, quinine, has little or no value. In the early stages, head colds are often aborted by freely opening the bowels and the skin. A hot bath, followed by Dover's powder, and hot drinks just before retiring, are an excellent method of treatment if taken early enough. Calomel, in doses from one to three grains, given in one dose on retiring and followed by a saline in the morning, is another excellent remedy. (Do not give calomel in one-tenth divided doses every ten or twenty minutes and expect results.)

When acute coryza has become firmly established, constitutional medication has little effect. Rhinitis tablets, frequently given to check the over-abundant nasal secretion, act by virtue of the belladonna or atropine in them. They appear to afford relief in certain cases, while others are more distressed with the dryness in the throat than with the secretions from the nose.

Local treatment of coryza consists of alkaline or oily sprays—solutions of cocaine or adrenaline—inhalations of hot steam containing benzoin, iodine, menthol, etc. Cocaine should never under any circumstances be used in connection with a head cold. Solutions of adrenaline afford great relief for a certain length of time, but the question arises,—is the secondary reaction not more harmful in the end? A solution of argyrol, 10 to 20 per cent, affords great relief and appears to allay the inflammation permanently. Camphor, menthol, etc., in liquid petrolatum, sprayed into the nose often give relief. Watery solutions should never be sprayed into the nose when the acute symptoms are present. Later, when the secretion becomes thicker and the sneezing, swelling, etc., have subsided, unirritating watery solutions such as Dobell's or normal salt solution, may be gently sprayed into the nose. Such a practice is attended with some danger, however, as the solution may find its way into the Eustachian tubes and cause disturbance with the middle ear.

Marked pain over the eyes, or immediately under the eyes, attended with soreness of the teeth, mean involvement of the frontal sinus or Antrum of Highmore. These are serious conditions and cannot be overcome by household remedies. In case of severe pain, ice or heat may be applied until medical aid be secured.

Nasal catarrah is the name given by the laity to over-secretion from the nose falling into the throat. It is a very common occurrence and is popularly supposed to be incurable but not especially dangerous. Exactly the opposite is true. It is quite dangerous and is, in most cases, curable. Chronic rhinitis or "catarrah" is the great enemy to the hearing apparatus. It is a common cause for sore throat and laryngitis and it is a frequent source of *indigestion.*

Chronic rhinitis, in the majority of cases, is not a diseased process. If all the mucus secreted in the nose is vaporized by the air passing through it, no dropping of secretion will occur into the throat. On the other hand, if most of the air passing through the nose finds its way through but one side of the nasal organ, then the mucus secreted by the small side will not be vaporized. Many people breathe through but one side of the nose most of the time. It is such people who have nasal catarrh, deafness, laryngitis, etc. No amount of washes, sprays, ointments, etc., will give relief. This, of course, is the reason the trouble is supposed to be hopeless of cure. Modern nasal surgery has done much for the condition, and brilliant results are often obtained.

The reason for one-sided nasal breathing is most commonly due to a bent nasal partition. The bend may be a simple bow-shape, or it may be compound like the letter "S." With a bent partition, one side is too large, and the other, too small. With such a condition a curious phenomenon occurs. Nature attempts to rectify the condition, not by making the small side larger, but by making the large side smaller. Nature in this respect fails utterly to remedy the evil, as the final result is that both sides become too small. Nature's attempt in this case is to equalize the passages in order that the air stream may pass equally through both sides. Formerly the turbinate bones were cut or cauterized, in order to restore air spaces in the nose, but such a practice is frowned upon by the better specialists at the present time. *Destroying turbinate tissue, if it can be avoided, is a surgical crime.* Bent nasal septums are very uncommon in young children but are exceedingly common among adults. Mouth breathing among children is due to the pressure of adenoids, or to abnormally narrow noses. In adults, it is most frequently due to the presence of deflected or broken nasal septums. If the bend in the septum is corrected, the swollen turbinate will care for itself, if the condition has not been present too long. In cases of long standing, the turbinates undergo structural changes which render them unfit to perform their natural duties, and they are unable to resume their natural form and size. Such turbinate structures sometimes require partial removal to allow normal nasal breathing.

Actual or partial loss of the sense of smell is not uncommon. Complete loss of smell may be due to a destruction of the nerve terminals in the nose, but it is more apt to be due to a simpler cause. In many cases the nose is so swollen, the air is unable to reach the nerve terminals and is thus unable to stimulate the nerve. In one of my cases the sense of smell returned after being absent sixteen years. This occurred after a large number of polypi were removed. A number of other cases have regained the sense of smell after having lost it from a few months to several years. Loss of the sense of smell exposes persons to more or less danger, as they are unable to recognize irritating or dangerous substances, such as illuminating gas or smoke.

IMPROVISING

By HELEN W. KELLY, R.N.

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An improvised wheel chair, devised by Mrs. H. E. Hayward of the Indianapolis Public Health Nurse Association, consists of an ordinary rocking chair, with two pairs of roller skates firmly strapped to the rockers. As roller skates are to be found in most families, this suggestion may be helpful to the private duty nurse.